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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/575,561

01/09/2007

Michael David Edwards White

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EXAMINER

LEE, BENJAMIN P

ART UNIT

PAPER NUMBER

3641

NOTIFICATION DATE

DELIVERY MODE

11/24/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptopatentmail@cantorcolburn.com

Office Action Summary	Application No. 10/575,561	Applicant(s) WHITE, MICHAEL DAVID EDWARDS	
	Examiner BENJAMIN P. LEE	Art Unit 3641	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-35 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>4/12/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 21, 26-28 and 30-33 are rejected under 35 U.S.C. 102(b) as being anticipated by Schaffler-Glossl et al. (U.S. Patent 2,076,512).
3. In regards to claim 21, Schaffler-Glossl et al (henceforth referred to as Schaffler-Glossl) disclose a detonator assembly which includes the following:

a first cable coil with first and second ends. Note the Schaffler-Glossl teaches multiple cable coils denoted as items 5 of figure 4 following each with opposing ends constituting first and second ends (see Schaffler-Glossl figure 4 following);

Art Unit: 3641

a second cable coil with third and fourth ends. Note the Schaffler-Glossl teaches multiple cable coils denoted as items 5 of figure 4 following each with opposing ends constituting third and fourth ends (see Schaffler-Glossl figure 4 following); a detonator connected to the first end of the first cable coil. Note that Schaffler-Glossl teaches a detonator connected to the first end of a cable coil as shown in figure 4;

a first connector connected to the second end of the first cable coil and to the third end of the second cable coil. Note that the next detonator in series, which is connected to the opposing or second end of the "first detonator", constitutes a "connector" since it connects the second and third ends of the opposing cable coils as shown in figure 4 following;

a second connector connected to the fourth end of the second cable coil. Note that Schaffler-Glossl teaches another "connector" (detonator) attached to the fourth end of the second cable coil (see Schaffler-Glossl figure 4 following); wherein a first variable length of cable, extending from the first end, can be drawn from the first cable coil without materially moving the first connector. Note that the cable coils of Schaffler-Glossl are taught to contain wound cable that is capable of being pulled or extended from the cable coils (from either end of coil) without "materially moving any of the detonators/connectors;

a second variable length of cable, extending from the fourth end, can be drawn from the second cable coil without materially moving the first connector. Note that the cable coils of Schaffler-Glossl are taught to contain wound cable that is

Art Unit: 3641

capable of being pulled or extended from the cable coils without "materially moving any of the detonators/connectors. Further, a claim containing a "recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus" if the prior art apparatus teaches all the structural limitations of the claim. Ex parte Masham, 2 USPQ2d 1647 (Bd. Pat. App. & Inter. 1987).

4. In regards to claim 26, Schaffler-Glossl discloses that each cable coil is at least partly enclosed in sheet material. Note that the cable coils of Schaffler-Glossl are taught to ultimately wrapped in an exterior covering "paper strips" (page 1, col. 2, lines 32-35) and the disclosed ends of the cables are taught to extend from within this covering.

5. In regards to claim 27, Schaffler-Glossl discloses that the cable coils are co-axially aligned with each other. Note that the cable coils of Schaffler-Glossl are aligned along their "center" axis (see Schaffler-Glossl figure 1 following).

6. In regards to claim 28, Schaffler-Glossl discloses that the detonator assembly includes confinement structure for maintaining the cable coils in a desired configuration. Note that the cable coils of Schaffler-Glossl are taught to ultimately wrapped in an exterior covering "paper strips" (page 1, col. 2, lines 32-35) which constitutes a "confinement structure".

7. In regards to claim 30, Schaffler-Glossl discloses that the confinement structure comprises flexible sheet material. Note that Schaffler-Glossl teaches a paper strip covering (page 1, col. 2, lines 32-35).

8. In regards to claim 31, Schaffler-Glossl discloses that the flexible sheet material is shrunk onto the cable coils since product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps; “even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process.” *In re Thorpe*, 777 F.2d 695, 227 USPQ 964.

9. In regards to claim 32, Schaffler-Glossl inherently discloses that the first connector is accessible without removing the confinement structure (see Schaffler-Glossl figure 4 following).

10. In regards to claim 33, Schaffler-Glossl discloses that the confinement structure includes first and second compartments for the first and second cable coils respectively.

Art Unit: 3641

Note that the paper strip covering of Schaffler-Glossl inherently constitutes compartments which confine the cable coils (see Schaffler-Glossl figure 4 following).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 22-25 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schaffler-Glossl et al. (U.S. Patent 2,076,512) in view of Spraggs et al. (U.S. Patent 3,987,732).

12. In regards to claims 22 and 24, Schaffler-Glossl fails to explicitly disclose that the first and second cable coils are provided in the form of a first and second tubular roll respectively. Schaffler-Glossl teaches that the coils may form a "rectangular cross-

Art Unit: 3641

section" (page 2, col. 1, lines 25-27). However, Spraggs et al (henceforth referred to as Spraggs) teaches cable coils of a tubular configuration (see Spraggs figure 1 following). It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to wrap the cable of Schlaffler-Glossl in any of various coil configurations including a tubular roll as taught by Spraggs, since a tubular form allows the cable to pay out more effectively and efficiently.

13. In regards to claims 23 and 25, Schlaffler-Glossl as modified discloses that the first end and fourth end are inside the first and second tubular rolls respectively. Note that the "first and second tubular roll" of Schlaffler-Glossl as modified are taught to ultimately be wrapped in an exterior covering "paper strips" (page 1, col. 2, lines 32-35) and the disclosed ends of the cables are taught to extend from within this covering.

14. In regards to claim 34, Schlaffler-Glossl fails to explicitly disclose that the confinement structure is circular cylindrical. However, Spraggs teaches cable coils and "confinement structure" that are formed of a circular cylindrical shape (see Spraggs figure 1 following). It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to wrap the cable of Schlaffler-Glossl in any of various coil configurations including a circular cylinder as taught by Spraggs, since a cylindrical form allows the cable to pay out more effectively and efficiently.

Art Unit: 3641

15. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schaffler-Glossl et al. (U.S. Patent 2,076,512) in view of Olin et al. (U.S. Patent 2,062,189).

16. In regards to claim 29, Schaffler-Glossl fails to explicitly disclose that the confinement structure is a housing which is made from rigid sheet material. However, Olin et al (henceforth referred to as Olin) teaches a housing for a detonator and coil that is "made from a rigid sheet material" (page 2, col. 1, lines 38-40). It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to utilize any of various materials to fabricate the "containment structure" of Schaffler-Glossl including a cardboard material which is commonly known to be a rigid sheet material and is taught by Olin to provide a housing for a detonator and coil assembly, since cardboard is cheap, sturdy and easily accessed.

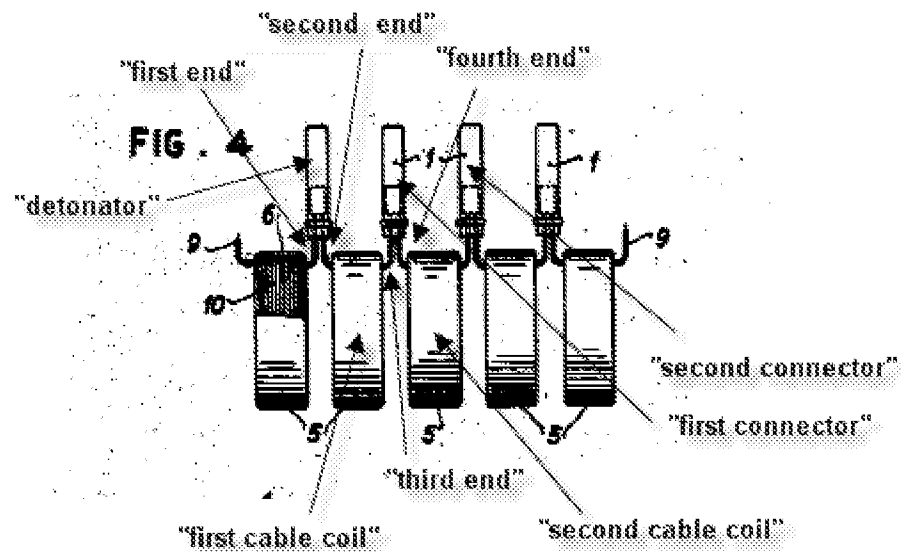
17. Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schaffler-Glossl et al. (U.S. Patent 2,076,512) in view of Hunt et al. (U.S. Patent 2,123,996).

18. In regards to claim 35, Schaffler-Glossl discloses that each cable coil comprises a plurality of windings which are arranged in over-lying layers around a hollow core and which form a circular cylindrical shape and that the detonator assembly includes confinement structure around the cable coils (see Schaffler-Glossl figures 4 following).

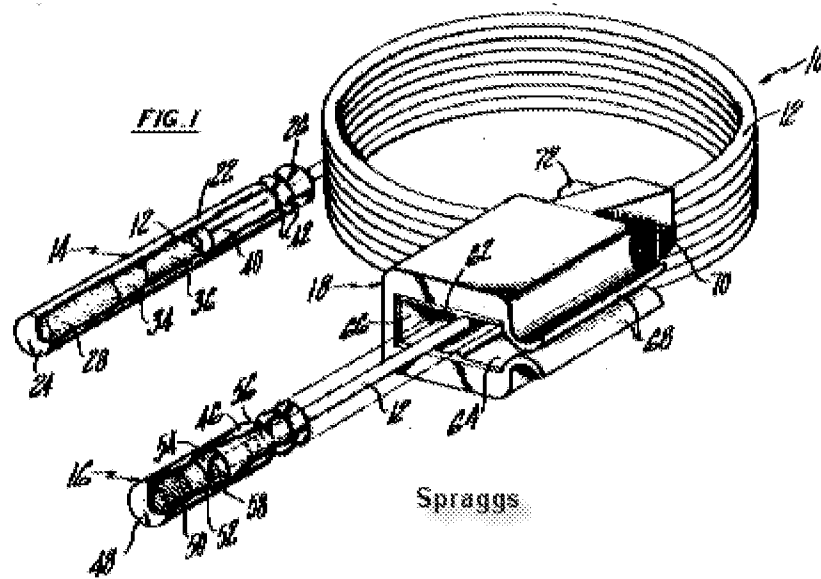
Art Unit: 3641

Schaffler-Glossl fails to teach that the first end extends from an innermost winding of the first cable coil, and the fourth end extends from an innermost winding of the second cable coil. However, Hunt et al (henceforth referred to as Hunt) teaches a detonator coil winding where an end extends from an innermost winding (see Hunt figures 4 and 5). It would have been obvious to one of ordinary skill in the art at the time of Applicant's invention to provide the coil winding of Schaffler-Glossl with the associated wire extending from the interior of the coil (innermost winding) such as illustrated by Hunt, since the inner portion of a wire coil provides a interference free area for wire deployment.

Art Unit: 3641



Schaffler-Glossl



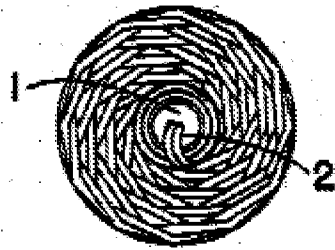


FIG. 4

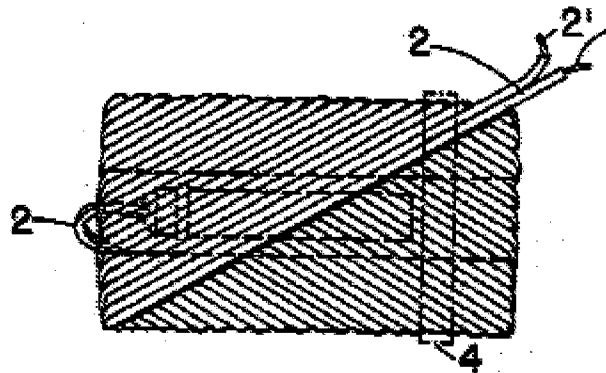


FIG. 5

Hunt

Summary/Conclusion

19. Claims 21-35 are rejected.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Benjamin P. Lee whose telephone number is 571-272-8968. The examiner can normally be reached between the hours of 8:30am and 5:00pm on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Carone can be reached on 571-272-6873. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For

Art Unit: 3641

more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/B. P. L./

Examiner, Art Unit 3641

/Michael J. Carone/

Supervisory Patent Examiner, Art Unit 3641